REMARKS

This amendment is submitted in response to the Office Action dated December 7, 2006. Reconsideration and allowance of claims is requested. In the Office Action, claims 1-25 were examined and rejected as being anticipated by Aviani, et al. (US 6,976,085). This rejection is respectfully traversed. In this response, the independent claims are amended. Claims 2, 7, 8, 11, 12, 24 and 25 are cancelled and replaced by new claims 26-34 to clearly recite features of this invention.

As described in the present invention, conventional Transmission Control Protocol (TCP) processing is exemplified by systems and methods developed to accelerate data transfer between a client and a server. In order to optimize the speed and timeliness of connections between a host CPU and a remote computer, the TCP stack in the host computer, which drives the connections through which inbound and outbound frames are transferred, may delegate connections that do not require special processing to a separate offload unit. Those connections that do require special processing are still executed by the TCP stack. Connections that are delegated to the high speed offload unit (in this example, the HOT unit 250) are executed with minimal intervention by the TCP stack, except as may be requested by the HOT unit. To keep track of the delegated and non-delegated connections, a delegated connection table is set up within the HOT unit to log all the delegated connections. A separate global connection table is maintained in the host CPU to store connection data for all active connections. Where a HOT unit lacks the time or memory space to maintain the communication session, the delegated connection may be referred back to the TCP stack and host CPU for processing, which is referred to in the present application and claims as "legacy" processing. As further set forth in the pending claims of this application, the HOT unit develops the necessary checksum so that the integrity between outgoing and incoming frames is maintained. The HOT unit also maintains a sequence count so that only incoming frames which appear in the proper sequence can be processed by the HOT unit. Out of sequence frames are referred back to the TCP stack for processing. Certain thresholds are also established in the HOT unit, and if these thresholds are exceeded, the frames are not processed by the HOT unit, but are

referred back to the TCP stack for processing. The HOT unit also receives acknowledgements contained in incoming frames and reports these to the host. To reduce the amount of data being transmitted, the ACK's may be coalesced and reported periodically to the host, rather than sequentially.

These features are not found in Aviani, which describes a different system that does not, in any respect, divide up communications processing between a higher level host CPU and a dedicated offload unit or similar device. Rather, Aviani teaches sending output frames to a second unit 130, which includes an insertion manager for inserting additional data into each outbound frame and providing a means for keeping track of the data inserted in the outbound frames. There is no separation of processing frames between a host unit, which processes the more complex outbound frames, and an offload unit, which processes simple dedicated frames, as clearly recited in the pending claims. In fact, the more complex frames are developed in what the Examiner characterizes as the offload unit 130. In addition, there is no teaching in Aviani of both a primary connection table, which keeps track of all connection, and a delegated connection table, which keeps track of only those connections that have been offloaded to the offload unit. What the Examiner characterizes as a delegated connection table index 302, is instead a table for keeping track of the amount of data inserted into packets exchanged between first and second devices 110 and 140. The table 302 is not analogous to either of the tables maintained in the claimed system. With respect to claims 13 and 14, the Aviani reference does not teach segmenting the processing of incoming frames between an offload unit and a host CPU based on whether or not a sequence number in the received frame is the next consecutive sequence number. Further, in Aviani, all incoming frames are processed at the same inbound location 130.

The Examiner rejects claim 17 for the same reasons as claim 13, although there is no teaching of thresholding in the reference to support the rejection of claim 13, and amended claim 19. The Examiner rejects claim 22 for the same reasons as claim 1. Claim 1 as well as claim 22, as amended, clearly sets forth a method and an apparatus which are distinguishable from the Aviani reference in their recitation of a primary host computer, an offload unit, and the segmentation of processing operations between the host unit and the offload unit, utilizing both a delegated connection table for tracking

connections that have been delegated to the offload unit and a primary connection table, which keeps track of all established connections. The primary connection table facilitates the transfer of frames, which cannot be processed at the offload unit, back to the host CPU, unit even after the connections through which those frames are transmitted and received have been included in the delegation table, a feature not found in Aviani. Further, none of the features in new claims 26-34 appear in the reference.

In view of these clear distinctions, reconsideration and allowance of pending claims is respectfully requested.

Respectfully submitted,

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